

deep olive-brown, the lower third of the discoidal cell of primaries sparsely irrorated with sulphur-yellow scales, the cell surrounded by a series of longitudinal tapering rays, sulphur-yellow irrorated with brown, the pointed extremities of the first six of these rays being cut off by a stripe of the ground-colour from apical fourth of costa to external angle: secondaries sulphur-yellow, irrorated with brown, but with the nervures and a broad external border which emits pyramidal spurs along the nervures deep olive-brown; three elongated clear yellow spots terminating the second to fourth internervular streaks: under surface similar to *C. ctemene* ♂, but the yellow patch on the primaries broken up into narrow streaks by the broad brown borders to the nervures.

Expanse of wings 67 millim.

Pucartambo, Peru (*Whitely*).

Catasticta straminea, sp. n.

Allied to *C. eurigania* from Ecuador, but the upper surface deep buff or straw-yellow, with all the veins black; three elongated spots placed obliquely on the black apical area, the middle one large, the others small: secondaries with the outer border broadly black, with a deep sinus in the radial interspace.

Expanse of wings 47 millim.

Hab. —?

Two specimens of this species stood in Hewitson's collection with two of his *C. eurigania* from Ecuador and two of *C. notha* from Bolivia, the label "*eurigania*" standing below the three species. Unfortunately Hewitson neglected to label the present species with its locality.

VIII.—*Descriptions of some new South-African Spiders of the Family Heteropodidæ.* By R. I. POCKOCK, of the British Museum of Natural History.

[Plate VIII.]

Selenops Spenceri, sp. n. (Pl. VIII. figs. 8, 8 a.)

♀. *Colour* yellowish brown; carapace partially clothed with white hairs, which, contrasting with the yellow of the integument, gives it a mottled appearance, a fine dark line on its lateral edges, and the region of the eyes deeply pigmented with black. Abdomen thickly mottled above with fine brown and white spots; clothed with whitish hairs below. Sternum,

labium, maxillæ, coxæ, and lower surface of limbs pale yellow, rather scantily covered with silky white hairs. Mandibles reddish yellow, very faintly infuscate distally, sparsely covered with longish white hairs. Palpi pale, with a fuscous spot at each end of the tarsus. Legs with femora faintly variegated with stripes; patellæ, tibiæ, and protarsi with a proximal fuscous spot, the one on the protarsus very broad; tibiæ in addition with a broad band in the distal half and protarsus with a narrower one at its distal extremity.

Carapace considerably wider than long, its width a little less than the length of the fourth tibia; cephalic region slightly elevated, the face moderately high; the clypeus about as high as the diameter of the anterior median or posterior median eye. The anterior medians separated by a space which is distinctly less than their diameter, a little closer to the posterior median, which are more than twice their size, and have advanced much less to the front than is usual in *Selenops*, and stand so high that, when viewed from the front, their inferior edge is only a little below the level of the inferior edge of the anterior median; the anterior lateral oval, less than half the size of the anterior median, but in the same straight line, situated on the lower side of an elevation which bears on its posterior lateral surface the posterior lateral eye, which is considerably larger than the posterior median.

Inferior mandibular margin armed with 3 strong teeth in front and 2 behind.

Palp: femur with 5 spines above; patella with 3, one internal larger, two median setiform; tibia with 6 spines; tarsus with a transverse row of 6 very long spines in its proximal half, 3 below at the apex, and 1 on the inner surface. Some of the spines on the palp pale, some black.

Legs 4, 3, 2, 1, armed above with 3 pairs of spines, those of the anterior row black, of the posterior pale; also with 3 on their anterior surface, the proximal of these pale. Patella with 1 posterior spine; tibiæ of first and second legs with 7 pairs of inferior spines, protarsi with 3 pairs; tibiæ of third with 2 pairs of inferior spines, protarsus with 1 pair; tibia and protarsus of fourth only weakly spined; tarsi and protarsi of first and second weakly and biserially scopulate, of third and fourth not or hardly scopulate.

Sternum almost circular, a little longer than wide, widest between the coxæ of the second legs.

Vulva with the form of a longitudinally oblong plate, with its anterior two-thirds deeply hollowed with an oval or horseshoe-shaped excavation; the plate laterally and posteriorly overgrown with hairs.

Measurements in millimetres.—Total length 11; length of carapace 5·6, width 6·5; length of first leg (from base of femur) 25, of second 26·5, of third 27·3, of fourth 28·5.

Loc. Durban (*H. A. Spencer*). A single female example.

Apparently resembling *S. atomarius*, Simon (*Bull. Soc. Zool. Fr.* xii. p. 465, 1887), from Port Elizabeth, in having the median eyes forming a strongly recurved line, but differing in having 7 pairs of spines upon the lower surface of the anterior tibiæ instead of 5, and also apparently in the form of the vulva.

It is an interesting fact connected with *Selenops* that the females of this genus do not, like *Heteropoda*, make a lenticular cocoon and carry it about with them, but attach their eggs to some foreign object, and cover them with a sheeting of thin, smooth, parchment-like silk.

Palystes Johnstoni, sp. n. (Pl. VIII. figs. 1–1 c.)

♀. *Colour.*—Upperside of legs and carapace castaneous, but clothed uniformly with a thick layer of greyish-white hairs, a transverse stripe of yellowish-white hairs on the clypeus; upperside of abdomen pale brown, deeper in the hinder half above the anus, where the brown area is bordered by a deep chocolate-brown sinuous edge, which separates it from the white posterior lateral portions of the abdomen; in front the upperside of the abdomen is ornamented with 2 fine rather indistinct dark-coloured longitudinal lines, which meet posteriorly in a point; lower surface of abdomen whitish, mottled with yellow spots; the epigastric region blackish, but covered with golden-yellow hairs, and behind this region there is a narrow deep brown transverse crescentic stripe. Palpi yellower than the legs, uniformly coloured above and below, but the tarsal segment apically infuscate. Mandibles blackish brown, clothed with golden-yellow hairs, but not noticeably striped. Maxillæ with their distal third pale; labium with pale border. Sternum clothed with yellow hairs; 2 thickish black stripes crossing its middle transversely, the anterior of these in a line with the dark stripe on the second coxæ, the posterior, which is angular, each half being directed obliquely forwards to touch the stripe in front, being similarly continuous with the dark anterior half of the third coxæ. Legs having their coxæ black in front, yellow behind; femora of first and second legs with the basal half reddish brown; all the tibiæ with 2 spots of the same colour, 1 at their proximal end, the other just past the middle; the scopulæ of the protarsi fiery red, of the tarsi greyish brown, the rest of the lower surface of the legs yellowish white.

Carapace as long as tibia, + $\frac{1}{3}$ of patella of fourth leg ; width equalling length of tibia of third leg.

Legs 1-2, 4, 3. Femora unarmed below ; tibiæ armed with 6 long spines in 3 pairs, a pair springing from each of the spots and 1 pair at the distal end ; protarsi with 2 pairs of long spines in their proximal half ; femora with 3 anterior, 3 posterior, and 2 superior spines, that of the fourth, however, with only 2 posterior spines ; patella with 1 anterior and 1 posterior spine ; tibiæ with 1 superior, 2 anterior, and 2 posterior spines ; protarsi with 2 anterior and 2 posterior spines.

Vulva. (As in figure.)

Measurements in millimetres.—Total length 24 ; length of carapace 11·2, width 9 ; length of first leg 46, of second 46, of third 34, of fourth 40.

♂. Colour as in ♀, but abdomen with the pattern less well defined, and the lower surface of the femora mottled with yellow spots.

Palp. (As in figure.)

Measurements in millimetres.—Total length 17 ; length of carapace 8·2, width 7 ; length of first leg 45, of second 43·5, of third 32, of fourth 38.

Loc. Zomba, 3000-9000 ft. (*H. H. Johnston*): types. Also an immature specimen of apparently the same species from Ugogo (*Emin Pasha*).

This species seems in some respects to resemble *P. Höhneli* of Simon (*Ann. Soc. Ent. Fr.* 1889, p. 129) from Kilima Njaro, the resemblance between them being especially noticeable in the colour of the legs. It is to be observed, however, that Simon makes no mention of the banding on the sternum or coxæ, and according to the measurements the first and fourth legs are almost equal in length.

Palystes Ellioti, sp. n. (Pl. VIII. figs. 2, 2 a.)

Closely allied to *P. Johnstoni*, but having more black upon the maxillæ and sternum, only the distal fourth of the lower surface of the first and second femora palely yellow, and a broad brown band running backwards on the ventral surface of the abdomen from the epigastric fold to the spinners. The vulva is also quite distinct (see fig. 2).

Loc. Uganda, E. Africa (*G. F. Scott Elliot*).

Palystes Spenceri, sp. n. (Pl. VIII. figs. 3, 3 a.)

♀. Upperside of trunk and limbs clothed with dirty

yellowish-brown hairs, the legs faintly mottled with darker spots; the carapace without distinct pattern, sometimes, however, with a paler median band and a paler marginal line; the clypeus with a distinct white band, which is thickest in the middle. The abdomen ornamented above as in *P. Johnstoni*, but the distinction between the brown patch and the sides of the abdomen less well defined; the sides and lower surface a uniform yellowish brown. Mandibles not striped, black, but clothed with whitish-yellow hairs. Palpi ochre-yellow; tarsus distally fuscous below. Maxillæ and labium as in *P. Johnstoni*. Sternum yellow, with a single fuscous band crossing it in a line with the dark front half of the second coxæ. Coxæ of legs whitish yellow, with their anterior third blackish brown. Femora of first and second pairs with their basal half or almost two thirds deep reddish brown, the rest of the segment bright yellow, mottled with small brown spots; femora of third and fourth yellowish, mottled; patella bright yellow below; tibiæ also bright yellow, with a large basal brownish-red spot, and a second just past the middle; these spots sometimes rather indistinct upon the third and fourth legs. Protarsal and tarsal pads fuscous. Mandibles armed as in *P. Johnstoni*. Legs and palpi of the same relative length and spine-armature as in that species; but the examination of a large series of specimens shows that the number of spines is not quite constant.

Vulva. (As in figure.)

Measurements in millimetres.—Total length 39·5; length of carapace 14, width 12; length of first leg 55·5, of second 55, of third 41, of fourth 48.

♂. With the carapace browner on the summit than in the female; the posterior brown patch upon the abdomen not defined. The 4 pairs of femora almost of the same colour, being a brownish yellow, mottled with smaller dark spots.

Palp. (As in figure.)

Measurements in millimetres.—Total length 23; length of carapace 11, width 9; length of first leg from base of femur 54, of second 53·5, of third 39, of fourth 46, tibia of fourth 11·8.

Loc. Durban. A large number of specimens including the types obtained by Mr. H. A. Spencer.

Judging from the list of localities from which the Museum has received this species, it appears to be widely distributed in the south-eastern parts of Cape Colony. I cannot, however, discover that it has yet received a name, unless, indeed, the *Heteropoda natalia* of Karsch (Zeits. ges. Naturwiss. 1878, p. 772) be the same species. This last-named form

will probably be found to belong to *Palystes*, seeing that it has the white clypeus, the banded sternum, and the eyes of the front row of the same relative size as in the other South-African representative of this genus.

Palystes lunatus, sp. n. (Pl. VIII. fig. 5.)

Colour.—Carapace chestnut, clothed with yellowish-brown hair, with a fine white median line and the usual white clypeal band; mandibles black, clothed with yellowish-brown hair, with the white stripes scarcely apparent; legs and palpi chestnut, clothed with yellowish-brown hairs above; coxæ with only their anterior surfaces infuscate; femora of a uniform yellowish brown below; patellæ whitish yellow; tibiæ banded as usual with fuscous and whitish yellow; sternum clothed with yellow hairs, but marked in addition with 2 transverse fuscous bands which fuse in the middle; labium and maxillæ black, chestnut only at the tips; abdomen without very definite pattern above, obscurely mottled, deeper coloured posteriorly, and marked with 2 longitudinal blackish stripes in front; pale yellowish brown below, with a short narrow transverse black band in front of the epigyne, and a broad whitish crescentic one behind it, the rest of the area between the epigastric fold and the maxillæ marked with a few whitish spots and 4 fine longitudinal fuscous bands.

Vulva. (As in figure.)

Measurements in millimetres.—Total length 29; length of carapace 12·5, width 10; length of first leg (from base of femur) 46·5, of second 46·5, of third 38, of fourth 42·5.

Loc. S. Africa (*Dr. Quain*).

Differs from *P. Spenceri* in having 2 transverse fuscous bars across the sternum, the femora of a uniform tint below, a deep transverse crescentic band behind the epigastric fold, and the form of the vulva; in the latter characteristic, as well as in the colour of its sternum and femora, it also differs from *P. superciliosus* of L. Koch.

Palystes pulchripes, sp. n. (Pl. VIII. figs. 4, 4 a.)

? *Palystes superciliosus*, L. Koch, Die Arachniden Australiens, ii. p. 706.

♀. Closely related to *P. lunatus*, but with the carapace paler chestnut, with no median white band; the palpi pale yellow, with fuscous tips; the distal third of the maxillæ yellow; the sternum with a single dark band across it, and the lower surface of the femora variegated as in *P. Spenceri*, the basal half

being blackish and the distal bright yellow, although mottled. In one of the specimens the posterior end of the abdomen is ornamented above very much as in the figure of *P. superciliosus* published by Koch, but in two others this pattern is not visible.

Vulva small, pale-coloured, represented by a horny transverse bilobed plate, something like that of *P. superciliosus* of Koch (*op. cit.* pl. lxi. fig. 1 a); but the anterior lobes much shallower. There are, moreover, no posterior lobes and no transverse bar such as Koch has depicted.

Length 28 millim.; length of cephalothorax 12, width 9.5; length of first and second legs 42, of third 31.5, of fourth 36.5.

Loc. Port Elizabeth (*H. A. Spencer*).

Three apparently adult females were obtained at the above locality. They appear to be very nearly allied to *P. superciliosus* of Koch, but seem quite distinct, provided that Koch's figure of the vulva of *superciliosus* is correct.

Panaretus (?) *distictus*, sp. n. (Pl. VIII. figs. 7, 7 a.)

♀. *Colour*.—Carapace pale castaneous, covered with pale yellow hairs intermixed with rather stouter black ones; in the cephalic region there are some longish setæ, black at the base and pale distally; faint lines of black pigment radiating from the fovea; the lateral margin posteriorly narrowly black, the cephalic region mottled with small yellow spots; many longish yellow hairs between the eyes, but no white clypeal band. Mandibles pale castaneous, clothed with white or black-and-white hairs, and variegated with small black spots. Labium, maxilla, and sternum pale yellow, clothed with white hairs, with a few black-and-white ones intermixed; coxæ of the same colour, but variegated with small black spots; legs ferruginous or ochre-yellow, not noticeably banded, but mottled above with minute whitish spots; the femora mottled below with black spots; abdomen reddish brown above, finely mottled with minute black and white spots; yellowish white laterally and below and spotted with black, and furnished on each side of the spinners with a large elongate but irregularly shaped black patch, which is emphasized above by a fine border of white hairs.

Carapace very high in its posterior half, lightly convex towards the ocular area, cephalic region narrower; its length just exceeding that of the fourth tibia. *Eyes* of posterior row subequal in size and evenly spaced, forming a slightly recurved line; those of the anterior row also slightly recurved

when viewed from above, straight when seen from the front, the lower edge of the laterals being on the same level as that of the median; the anterior median about as large as the eyes of the hinder row, but much smaller than the anterior laterals and considerably nearer to them than they are to each other, the space between them being about equal to their diameter; space between the anterior and posterior lateral a little greater than the diameter of the former; the *clypeus* a little longer than the diameter of the anterior lateral eye.

Legs long and slender, 2, 1, 4, 3; their spine-armature approximately the same as in *Palystes Johnstoni* and the rest.

The *vulva* of large size and projecting vertically downwards. (For structure, see figure.)

Measurements in millimetres.—Total length 13; length of carapace 6, width 5; length of first leg (from base of femur) 24, of second 24.5, of third 19, of fourth 21.

Loc. East London (*H. A. Spencer*).

Judging from M. Simon's diagnosis of *Penaretus*, this species differs from the Oriental members of the genus in having the legs longer and the mandibles weaker, less geniculate, and normally hairy from base to apex.

Olios Spenceri. (Pl. VIII. fig. 6.)

♀. *Colour*.—Carapace pale castaneous, clothed with whitish hairs; mandibles black, maxillæ and labium chestnut; abdomen clothed above with yellowish-white hairs, with a median black stripe consisting of triangular spots, and mottled at the sides with blackish spots and short stripes; pale below, vulva deep black. *Palpi* reddish yellow, tarsal scopula fuscous; legs reddish yellow, clothed with yellowish-white hairs, scopulæ fuscous; tibiæ with two faint fuscous bands.

Carapace as wide as long; moderately convex, its width just equal to the length of tibia of first leg. *Eyes* of posterior row straight, subequal, and nearly evenly spaced; eyes of front row closer together, subequal, the median a little nearer each other than each is to the lateral, the space between median and lateral about equal to a diameter.

Mandibles sparsely hairy; armed below with 4 teeth behind and 2 in front.

Palp: femur with a cluster of 5 spines above distally; patella and tibia with 1 external and 1 internal; tarsus with 1 external and 3 internal. *Legs* 2, 1, 4, 3; the second excelling the first by its tarsus; the third and fourth only slightly unequal; femora of first, second, and third armed above with 8 spines (3, 2, 3), of fourth with 6 (3, 2, 1);

tibiæ of first, second, and third also armed with 8 spines, 2 in front, 2+2 below, 2 behind; tibia of fourth with 6 spines, the posterior pair missing; protarsi also with 8 spines, 2, 2 below, 2 in front, and 2 behind; that of the fourth leg with some extra apical spines.

Abdomen elongate oval. *Vulva* of large size, occupying the whole of the middle of the epigastric plate, nearly circular, its posterior border emarginate, the middle of the emargination deeply notched, the notch passing into a deep sulcus, which divides the vulva into two halves; the surface of the plate marked with a deep oval excavation.

Measurements in millimetres.—Total length 15·5; length and width of carapace 7; length of first leg 27, of second 29·5, of third 21·5, of fourth 22·5.

Loc. Durban (*H. A. Spencer*). A single female specimen.

Mr. H. A. Spencer also obtained in S. Africa specimens of the two following species of Heteropodidæ:—

1. *Palystes megacephalus* (C. Koch), *Die Arachn.* xii. p. 25 (1848) (*Ocypete*).

Loc. Port Elizabeth. Adult male and female.

This species is, I think, generically distinct from the rest of the S.-African species of *Palystes*. The carapace is both higher and longer, the width falling considerably short of the distance between the posterior border and the eyes of the hinder row. These eyes, too, are not evenly spaced as in *Palystes*, the distance between the two medians being noticeably less than that between the medians and the laterals. The legs, moreover, are distinctly less “laterigrade” than is usual with the Heteropodidæ.

2. *Palystes castaneus* (Latr.). (Pl. VIII. fig. 9.)

Themisus castaneus, Latr. *Nouv. Diet. Hist. Nat.* xxxiv. p. 30 (1819) (*teste* Simon).

Olios castaneus and *fuscus*, Walck. *Ins. Apt.* i. pp. 571-573 (1837) (*teste* Simon).

Ocypete melanogaster, C. Koch, *Die Arachn.* xii. p. 31 (1845).

Ocypete nobilis (Fabr.), C. Koch, *ibid.* p. 37, ♀ (probably not *nobilis* of Fabricius, which is said to be Indian).

Mr. Spencer obtained three examples of this handsome species at Cape Town.

In the figure of the vulva that L. Koch has published (*Die Arachn. Australiens*, pl. lx. fig. 4 b) the median notch on the

posterior border should have been represented as much deeper and angular, and the ridges defining the two anterior depressions as much stronger.

In addition to being smaller than the female, the male differs in having the lower surface of the femora white, but rather thickly mottled with small brown spots—these segments, at least on the anterior two pairs of legs, being in the female reddish brown, and not spotted. The male, in fact, agrees so closely with the description of *Ocypete melanogaster* of C. Koch (Die Arachniden, xii. p. 31) that I have not hesitated to regard the latter as the male of *castaneus*.

The palpus is distally much enlarged, the tarsus bearing in the middle of its external edge a smooth black excrescence; the external portion of the bulb consists of a swollen semi-circular densely coriaceous skeletal piece, and from this three long processes pass forwards to the apex of the alveolus, the external of these being membranous and fimbriated, the median straighter, more horny, and apically hooked. The proximal end of the tarsus narrowed to form a slender neck. The prominence on the tibia very stout, and bearing one long process, which curves abruptly inwards and supports on its base an angular tooth, while a third strong, hooked, but short tooth rises from the external angle of the prominence.

EXPLANATION OF PLATE VIII.

Fig. 1. Palystes Johnstoni, sp. n. ♀, upper view, nat. size.

Fig. 1 a. Ditto. Lower view.

Fig. 1 b. Ditto. Vulva.

Fig. 1 c. Ditto. Palp of ♂.

Fig. 2. Palystes Elliotti, sp. n. Vulva.

Fig. 2 a. Ditto. Lower view of trunk, nat. size, to show pattern of colours.

Fig. 3. Palystes Spenceri, sp. n. Vulva.

Fig. 3 a. Ditto. Palp.

Fig. 4. Palystes pulchripes, sp. n. Vulva.

Fig. 4 a. Ditto. Lower view of trunk, to show pattern.

Fig. 5. Palystes lunatus, sp. n. Vulva.

Fig. 6. Olios Spenceri, sp. n. Vulva.

Fig. 7. Panaretus (?) *distictus*, sp. n. Vulva.

Fig. 7 a. Ditto. Lower view of trunk, nat. size.

Fig. 8. Selenops Spenceri, sp. n. Vulva.

Fig. 8 a. Ditto. Face.

Fig. 9. Palystes castaneus (Latr.). Margin of vulva.